

REMARKS

Applicants thank the Examiner for carefully considering this application. Please reconsider the application in view of the above amendments and the following remarks.

Disposition of Claims

Claims 1-19 were pending in this application. New claim 20 has been added in this reply. No new matter has been introduced by this amendment. Claims 2, 7, 12, and 16 have been cancelled. Therefore, claims 1, 3-6, 8-11, 13-15, and 17-20 are pending in this application. Claims 1, 6, 11, and 15 are independent. The remaining claims depend, directly or indirectly, from claims 1, 6, 11, and 15.

Rejection(s) under 35 U.S.C § 112

Claim 13 was rejected under 35 U.S.C. § 112 as indefinite. Applicants thank the Examiner for carefully reviewing this application. Claim 13 has been amended in this reply to correct the typographic error. Accordingly, withdrawal of this rejection is respectfully requested.

Rejection(s) under 35 U.S.C § 102

A. Claims 1-19 were rejected under 35 U.S.C. § 102 as anticipated by Vollmer et al. (U.S. Patent No. 6,489,270) ("the Vollmer et al. '270 patent"). Claims 2, 7, 12, and 16 have been cancelled in this reply, rendering the rejection with respect to these claims moot. Claims 1, 3, 5, 6, 10, 11, 14, and 15 have been amended in this reply to clarify the present invention recited. To the extent that this rejection may still apply to the amended claims, the rejection is respectfully traversed.

The present invention relates to thermally stable, substantially water-free well fluids and methods for treating a well using such fluids. Because of the stress conditions (e.g., high temperatures, high shear, high pressures, and low pH) to which well fluids are often exposed, prior art polymer based well fluids tend to degrade rather quickly. (Specification, p. 3, paragraph 9). Embodiments of the invention provide well fluids that are substantially free of water and, thus, are more resistant to stress-induced degradation. Embodiments of the invention use alcohols, diols, polyols, and their derivatives (e.g., ethers or glycerolates) to dissolve polymers and salts. These compositions are substantially water-free and, therefore, the polymers are not prone to degradation.

As amended, claims 1 and 11 recite embodiments using glycol ethers and include the limitation of "a glycol compound comprising at least one selected from diethylene glycol methylether, diethylene glycol ethylether, triethylene glycol methylether, and triethylene glycol ethylether." As amended claims 6 and 15 are directed to well fluids using glycerolates or hexanediols and include the limitation of "an alcohol compound comprising at least one selected from glycerol-1,3-diglycerolate, glycerolethoxylate, 1,6-hexanediol, and 1,2-cyclohexanediol."

In contrast, the Vollmer et al. '270 patent discloses the use of "glycerol, glycol, polyglycol and mixture thereof. The glycols include commonly known glycols such as ethylene glycol, propylene glycol and butylenes glycol." (Col. 5, lines 17-20). The Vollmer et al. '270 patent does not disclose the use of ethers or glycerolates. Therefore, the Vollmer et al. '270 patent cannot anticipate amended claims 1, 6, 11, and 15, and, therefore, these claims are patentable. Claims 3-5, 8-10, 13-14, and 17-19, which depend, directly or indirectly, from claim 1, 6, 11, or 15, should also be patentable for at least the same reasons. Accordingly, withdrawal of this rejection is respectfully requested.

B. Claims 1-3, 5-8, 10-17 and 19 were rejected under 35 U.S.C. § 102 as anticipated by Vollmer et al. (U.S. Patent No. 5,785,747) ("the Vollmer et al. '747 patent"). Claims 2, 7, 12, and 16 have been cancelled in this reply, rendering the rejection with respect to these claims moot. Claims 1, 3, 5, 6, 10, 11, 14, and 15 have been amended in this reply to clarify the present invention recited. To the extent that this rejection may still apply to the amended claims, the rejection is respectfully traversed.

As noted above, the amended claims 1 and 11 recite embodiments using glycol ethers and include the limitation of "a glycol compound comprising at least one selected from diethylene glycol methylether, diethylene glycol ethylether, triethylene glycol methylether, and triethylene glycol ethylether," while the amended claims 6 and 15 are directed to well fluids using glycerolates and hexanediols and include the limitation of "an alcohol compound comprising at least one selected from glycerol-1,3-diglycerolate, glycerolethoxylate, 1,6-hexanediol, and 1,2-cyclohexanediol."

The Vollmer et al. '747 patent discloses the use of a dihydric or polyhydric alcohol having a molecular weight of from about 60 to about 600. (Col. 4, lines 17-18). It does not disclose the use of ethers or glycerolates. Therefore, it cannot anticipate claims 1, 6, 11, and 15, and, therefore, these claims are patentable. Claims 3, 5, 8, 10, 13, 14, 17, and 19, which depend, directly or indirectly, from claim 1, 6, 11, or 15, should also be patentable for at least the same reasons. Accordingly, withdrawal of this rejection is respectfully requested.

C. Claims 6, 9, 10, 15, 18, and 19 were rejected under 35 U.S.C. § 102 as anticipated by Mzik. (U.S. Patent No. 4,567,947) ("Mzik"). Claims 6 and 15 have been amended in this reply to clarify the present invention recited. To the extent that this rejection may still apply to the amended claims, the rejection is respectfully traversed.

As noted above, the amended claims 6 and 15 are directed to well fluids using glycerolates and hexanediols and include the limitation of "an alcohol compound comprising at least one selected from glycerol-1,3-diglycerolate, glycerolethoxylate, 1,6-hexanediol, and 1,2-cyclohexanediol."

Mzik discloses well fracturing fluids including an aliphatic alcohol, a polyalkylene oxide homopolymer, and a salt. Mzik does not disclose the use of ethers or glycerolates and cannot anticipate claims 6 and 15. Therefore, these claims are patentable. Claims 9, 10, 18, and 19, which depend, directly or indirectly, from claim 6 or 15, should also be patentable for at least the same reasons. Accordingly, withdrawal of this rejection is respectfully requested.

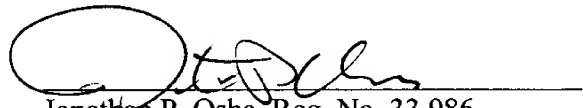
D. New claim 20 depends from claim 11 and, therefore, is patentable for at least the same reasons.

Applicants believe this reply to be fully responsive to all outstanding issues and place this application in condition for allowance. If this belief is incorrect, or other issues arise, do not hesitate to contact the undersigned or his associates at the telephone number listed below. Please apply any charges not covered, or any credits, to Deposit Account 50-0591 (Reference Number 05542.012001).

Respectfully submitted,

Date: _____

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